

DOCKET NO: 295335US0PCT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :
KARL OTT, ET AL. : EXAMINER: NOAH S. FRANK
SERIAL NO: 10/591,662 :
FILED: SEPTEMBER 5, 2006 : GROUP ART UNIT: 1796
FOR: NOVEL SOLVENT FOR :
PRODUCING POLYURETHANE
DISPERSIONS

REPLY BRIEF

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

In response to the Examiner's Answer, dated September 4, 2009, Applicants respectfully submit the following remarks:

REMARKS

The Examiner has alleged that Bruchmann describes solvents having a b.p. of 40 to 100°C for only the “acetone process” and that the “prepolymer process” described in the reference does not require the same solvents. Applicants respectfully disagree and point to [0081] which states:

Preferred solvents are of unlimited miscibility with water, have a boiling point of from 40 to 100°C. under atmospheric pressure, and react slowly, if at all with the monomers.

Paragraph 81 precedes Bruchmann's description of the acetone process which is described in [0082] as one of several methods to prepare the dispersions.

Bruchmann is directed to a dispersion which is to be coated on a substrate and subsequently dried [0092]. Therefore, solvents which are readily removed under normal drying conditions are necessary to allow the coating to form. Applicants respectfully submit that solvents such as N-ethylpyrrolidone and N-cyclohexylpyrrolidone, having boiling points of 97 °C/20mm Hg and 154 °C/7 mm Hg, even at less than 10% would not be readily removed from the Bruchmann coating under normal drying conditions and therefore would not be suitable for the intended use described by the reference.

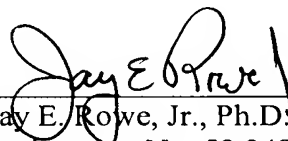
Applicants further disagree with the Examiner's assessment that the technologies described by Bruchmann and Galen are analogous because they are both directed to polyurethanes. Applicants submit that Galen is directed to a completely non-aqueous process system and describes prepolymer/solvent mixtures stabilized by lactones and lactams (Col. 8, lines 33-37). In contrast, Bruchmann describes a process wherein a prepolymer is dispersed in water. Stability of the prepolymer in a non-aqueous solvent is not an issue of concern and as described above, Bruchmann teaches use of a low-boiling solvent, if one is used, for ease of removal.

Applicants respectfully submit that the technology being addressed in the references is one of preparing prepolymer mixtures, a solvent mixture in Galen and an aqueous dispersion in Bruchmann. Applicants respectfully submit that chemistry and problems addressed by the two references is different and therefore nonanalogous.

For all the above reasons and the reasons previously presented, Applicants respectfully submit that the rejection of Claims 15-25 under 35 U.S.C. 103(a) as being unpatentable over Bruchmann et al. (DE 10161156; equivalent to U.S. 2005/0043467) in view of Galan et al. (U.S. 4,757,095) should be reversed.

Respectfully submitted,

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